

+ SOME SUGGESTIONS

FOR

4-H CLUB PROGRAMS

CONTRIBUTIONS  
BY  
FEDERAL EXTENSION SUBJECT-MATTER SPECIALISTS

EXTENSION SERVICE  
U.S. DEPARTMENT OF AGRICULTURE

670 (6-47)

AUG 8 1947

U.S. DA  
LIB

AGBU  
811

## CONTENTS

	Pages
Foreword - M. L. Wilson .....	1
Making 4-H club work mean more - A message to 4-H members - E. J. Niederfrank .....	1
4-H financial program - J. L. Robinson .....	2
Farm records - Z. L. Galloway .....	3
Phases of farm and home planning for 4-H members - L. M. Schruben.	5
Home management - Mary Rokahr .....	5
Family relationships - Mrs. Lydia Lynde .....	9
Foods and nutrition - Mary E. Loughhead .....	10
Health - Elin L. Anderson .....	13
Clothing - Alice Sundquist .....	14
Home industries - Reba Adams .....	18
Agronomy - O. S. Fisher, J. M. Saunders .....	20
Horticulture - R. J. Haskell .....	21
Plant Pathology - R. J. Haskell .....	23
Entomology - M. P. Jones .....	24
Livestock - C. D. Lowe .....	28
Family meat supply - K. F. Warner .....	29
Dairy - R. C. Jones, W. E. Wintermeyer .....	29
Poultry - E. L. Shrader .....	30
Land-use planning - Virgil Gilman .....	30
Soil and water conservation - E. C. Hollinger, G. E. Riddell, W. R. Tascher .....	32
Forestry - W. K. Williams, A. M. Sowder .....	35
Agricultural Engineering - A. T. Holman .....	36
Marketing - Paul J. Findlen, Paul L. Fletcher, James F. Miles, Lee R. Paramore .....	38
Grain Marketing - W. B. Combs .....	39

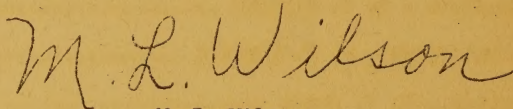


Foreword

The high regard which is held throughout this Nation for the training value of 4-H Club work to rural youth is due, in no small measure, to the underlying pattern whereby sound educational psychology and up-to-date subject matter, aimed at a specific project, are closely tied together. Because leadership of 4-H Clubs and leadership in subject matter are so closely interwoven, there has been an increasing demand on the part of subject matter people for material similar to that issued by this office during the war under the heading, "Wartime Guideposts."

Herewith we are offering such a guide, written from the slant of peacetime 4-H Club work. Because of the influence of the 4-H Club program toward setting and upholding a spiritually and morally high standard of family life, and a progressively improving practical standard of living, I regard the enclosed suggestions of our subject-matter specialists, prepared under the leadership of J. L. Boatman, as of the utmost importance.

We hope that State extension specialists will take these forward-looking contributions of our staff and adapt them to the needs of local communities. No doubt, agricultural communities will face numerous adjustments in the coming years. Through the introduction of sound agricultural and homemaking practices, via the 4-H Club route, specialists can be of major service to rural people.

A handwritten signature in cursive script that reads "M. L. Wilson". The signature is written in dark ink and is positioned above the printed name and title.

M. L. Wilson  
Director of Extension Work.

MAKING 4-H WORK MEAN MORE  
A SUGGESTIVE MESSAGE TO 4-H MEMBERS

E. J. Neiderfrank  
Extension Rural Sociologist

"It meant more to me than anything else" is a remark you have often heard someone say after some particularly helpful or interesting experience. How about your 4-H club work - what does your project and your club mean to you as a member or leader? What does it mean to your family? What does it mean to your community? In what way have your project and club activities influenced you to be a better boy or girl? What does your family know about your own 4-H club work, and what does it mean to them to have you in it? Do other people recognize your 4-H club as a successful community organization? How is it making your community a better place to live now?

Below are some things that might help you to make your 4-H club work mean more to you, your family, and your community.

1. Put what you learn into practice in all your activities about the farm, the house, and the community, not merely when you are working on your own project or club.
2. Tell your parents and at least two friends or other persons what you have learned from month to month in 4-H work, and help them to apply it. Remember there is both joy and education in helping others to better understand.
3. Have your club carry on at least two community service projects trying to get your community to build a public park or playground and helping them do it, conducting a recreation project for the community, assisting with safety and fire prevention campaigns, contributing services or assisting as a club with community fairs or other community activities, making a community survey of health needs, and having a representative on the community council if there is one in your locality. Also, so far as possible, take part in other general extension activities.
4. Develop means of maintaining or improving parental understanding of and cooperation in 4-H work, such as through member-parent banquets, parental participation in achievement days, public recognition of parental support, and use of parents in certain club activities. Also, be sure to recognize your adult volunteer club leaders.
5. Explain to local organizations and groups what your 4-H club work is and what you and your club are doing. This can be done in such ways as by talks before group meetings, team demonstrations, exhibits, and debates or panel discussions on club work or on other important rural topics of the day.



6. Value the skills you learn, the information you gain, the attitudes and habits you develop, and the experiences you have had in the club, more highly than the prize or high sale price you received on your project. Remember you are trying to make the best better, not merely more money.
7. Make a survey of all the young people in your community between ages 10-20 to find out who does not belong to 4-H clubs, why they do not, and what their needs or interests are. If you find any who once were 4-H'ers try to find out why they dropped out.
8. Check up on yourself every month by asking: Am I a better boy or girl in character, in health, in knowledge, and in ambition than before?
9. Help your State and county extension workers and local volunteer club leaders formulate 4-H club projects and activities based not only on your own experiences but also those of your fellow club members.
10. Be sure to keep a record or scrapbook of your individual and club activities, including such reminders as photographs, prize ribbons, news items, project books, and the like. Such things will help to make 4-H work mean more to you now, and they will be a source of joy and historical value to you in later years.

#### 4-H FINANCIAL PROGRAM

J.L. Robinson  
Extension Economist

A large part of the 4-H club members are striving to have an outstanding production project. They want recognition for a job well done, and they like the money returns a successful undertaking brings them. Nearly all of these members are using credit in some form and many are getting cash loans to carry outwell planned projects.

A large majority of those who use credit borrow from their parents. But production credit associations and banks are granting loans to thousands of these young people and would be glad to serve thousands more. Many club leaders are handling these loans according to plans especially designed to fit the needs of club members. The production credit associations use a group loan plan that also provides training in cooperation.

Before credit is used, each 4-H club member should consider carefully two phases of the undertaking: (1) Will the loan increase the profit to be made on the project? And (2) how will the money be obtained to pay the debt? On work-stock and breeding-cattle loans, plans should be made to pay at least one-third of the debt within 12 months. This usually calls for income from cash-crop or meat-animal projects or off-the-farm work.

Whether the money is obtained from a parent or from a credit agency, it should be handled in a businesslike manner. This is usually more easily effected if a note is signed. Sometimes a chattel mortgage should also be given. These steps familiarize the member with the usual credit forms and procedures which they will need to use when they run a farm for themselves. When obtaining loans from credit agencies, young people also make themselves personally known to these leaders and so establish credit ratings that may be of great help later.

It is a good idea for 4-H members to use part of their incomes to make savings and one of the best plans is to buy U. S. Savings Bonds. It may be easier to make such savings now than in later years. These savings in the future will enable these 4-H'ers to obtain a better education, get a quicker start in farming, set up housekeeping, or take a desired trip.

Sometimes members will be so favorably situated that they can combine their production and savings program by raising breeding livestock for their future use (not buying high-priced purebreds), or by getting needed equipment which they can use for a number of years.

## FARM RECORDS

Z. L. Galloway  
Extension Economist

The farm is a business and to be successful it must be conducted with sound business facts in mind. Club work on the whole will be more effective in preparing boys and girls for successful farm life if more emphasis is given to better business methods including better records, and adequate planning for the future welfare of the business, the farm home, and the individual. According to reports, the following approaches have proved effective in work with 4-H members.

### A. Why keep records.

1. To help develop desirable economic practices, habits, and attitudes.
2. To develop a deeper appreciation of economic values.
3. To provide information concerning financial progress or lack of progress.
4. To provide information concerning present financial status.
5. To provide a sound basis for credit at fair interest rates.
6. To provide a historical record of business transactions and other events needed in operating the farm and home.
7. To help one obtain the best possible income from the farm business and to so manage that income that it will contribute most to better farm living.



8. To help one better understand the use of good business methods, including records, and to serve as a basis for planning more effective use of one's resources.

B. Kind of records to keep.

1. Personal records -- may be kept by anyone with money to spend.
2. Household records -- include income and expenditures of the family.
3. Project records -- kept by 4-H club members and others on individual projects, and include records of expenditures including labor and receipts from the enterprise involved in the project.
4. Enterprise records -- include inventories, expenditures, receipts, and physical production of the entire enterprise on the farm. Farm labor, power, seeds, barnyard manure, and the like, are appropriately included as expenditures. The records also should include notes and pertinent data on methods of management followed.
5. Whole farm records -- these are kept on the farm as a whole and include inventories, receipts, expenses, acres and yields of crops, numbers and production of livestock, and other data pertaining to the operation of the farm as a business unit.

A records program may be developed from the above to meet the interest and growing needs of club members of various ages. Obviously the type of record which will be suited to a 12-year-old boy or girl will not adequately meet the needs of an 18-year-old club member. Only on rare occasions will a club member wish to keep two types of records at the same time.

C. How to keep records.

1. Keep entries up to date, day by day. This will conserve time and add accuracy.
2. Record at least three essential facts concerning each business transaction -- date, nature of transaction, and amount of items received and parted with.
3. Considering the use to be made of them, keep records as simple as possible.



## PHASES OF FARM AND HOME PLANNING FOR 4-H MEMBERS

Luke M. Schruben  
Extension Economist

Older 4-H club members can be given assistance, guidance, and encouragement in one or more of the following important aspects of farm and home planning by specialists, county workers, and leaders:

1. Estimating adequate family food supply considering  
(1) food requirements to provide family with an adequate diet,  
(2) the portion to be produced on the farm, and (3) the portion to be purchased.
2. Mapping the farm showing present field boundaries, roads, fences, ditches, and other significant features.
3. Preparing a suggested cropping plan taking into account soil fertility, livestock feed needs, and conservation measures.
4. Rearranging present field boundaries to provide proper field sizes for crop rotations, efficient use of available power, and necessary soil conserving measures.
5. Plotting present position of each building in the farmstead and then rearranging layout to provide best location of new building or rearrangement of present building before remodeling.
6. In families where the home is to be remodeled or a new one built, assisting in making to scale drawings of present and proposed plans and assisting also in the development of those plans.
7. Developing from appropriate labor requirements tables, labor requirement for major crops and livestock enterprises for the home farm.

## HOME MANAGEMENT 4-H CLUB PROGRAMS

Mary Rokahr  
In Charge, Home Economics Section

### Home Management Defined

"Home management is planning, guiding, and directing human and material resources for the optimal development of individual members and the family within the home and with other groups."

Optimal development of the individual is interpreted to mean social, emotional, mental, physical and spiritual growth. The resources involved may include: Energy (human and mechanical); time; money; goods and services (public and commercial); health; former associations and experiences; capacities and abilities (potential and developed); habits of working and living; active interests; and attitudes of different individuals. <sup>1/</sup>

<sup>1/</sup> Some Factors Involved in the Teaching of Home Management in Colleges, Misc. 2119. October 1938. U.S. Department of the Interior, Office of Education.

With a definition such as the foregoing in front of us, it is easy to envision home management knowledges, skills, and attitudes as permeating all 4-H Club programs, as well as having an identity of its own in a 4-H home management program. The choice by the State as to which area to emphasize during the next few years is independent upon the problems facing 4-H Club members in a given State. The basic concept is that every 4-H Club boy and girl should through the 4-H Club program learn to manage their own time, money, and material resources better, and have learned how to live and work with the family and in the community.

### Major Programs

Five major 4-H Club programs, however, right now and in the future deserve special attention:

1. Farm and home planning.
2. Money management.
3. Farm house improvement.
4. Work simplification; to teach better housekeeping methods and to "Make Every Motion Count."
5. 4-H home management: to teach managerial abilities and housekeeping skills.

### Family Approach

Family approach is not new in 4-H Club or adult extension work. It is a method of conducting extension work. When problems can only be solved by the family and Extension agents working together on it, then it becomes a "family approach" problem. Common examples are house improvement, inside and outside; financial planning; setting long-time goals; father-son partnerships; family recreation; and education.

In farm and home planning for production and consumption, 4-H Club members can take their place and develop projects keyed to the needs of the entire family. In 4-H girls club work many phases of food, clothing, and home improvement can and should in the future be keyed to the "family approach."

### Money Management

Two years after the war, finds farm income still high, but with farmers as well as businessmen studying carefully the future and how to avoid pitfalls of the past. 4-H Club work should help by giving ample opportunity to 4-H Club members to yearly understand the Family Living Outlook, and give members an opportunity to study their own financial needs, putting as much emphasis on learning how to use money as to earn money.

In 1945, 196,876 club members reported that they kept and used personal accounts. By 1950 when we have 3,000,000 members, that number should not be less than 1,000,000 members. A tool to help you is "My Personal Financial Record" which has just been revised and can be purchased from the National Committee on Boys and Girls Club Work, Inc., 59 E. Van Buren Street, Chicago 5, Illinois.



A 4-H member's financial record is one of the best devices known to help a member "get ahead" financially. Here is one program that deserves your support and interest in expanding. It will be as important in 1960 as today, and since the trend is in the direction of more rural and farm families buying their living, it becomes even more important to include it in a 4-H Club program.

#### Farm House Improvement

Lack of materials and equipment has so far hindered the overall housing improvement program, but the time will soon be at hand when such improvements will go forward. Two new teaching tools for home planning are now available. They are M.P. 622, YOUR FARMHOUSE -- CUT OUTS TO HELP IN PLANNING, and M.P. 619, YOUR FARMHOUSE -- HOW TO PLAN REMODELING, and can be secured from the Superintendent of Documents, U.S. Government Printing Office, Washington, 25, D.C., for 20¢ each. 4-H club members can be taught to use these tools and take the initiative in planning for a new house or remodeling.

Below is a list of what 4-H boys and girls can do to help:

1. With the help of parents, brothers, and sisters, make a list of the improvements that are needed -- estimate the cost.
2. Help collect good building ideas from magazines and other sources. Make a scrapbook on the needed improvements -- how to repair a roof, fix the steps, or install a new sink and drain.
3. Learn to paint, mix cement, lay bricks, refinish furniture, or whatever skills are needed to make the improvements.
4. Help make house plans. Use M.P. 622, YOUR FARMHOUSE -- CUT OUTS TO HELP IN PLANNING.
5. Help collect lumber, stones, or gravel from the farm for improvements.
6. Learn to make simple electric repairs, or, if electricity is not available, study house wiring plans and good lighting fixtures to be ready when electricity comes.
7. Efficient arrangements save motions and time. Plan improvements that will save steps. Check plans by counting the steps you take in doing the dishes, peeling potatoes, or some other household task.

#### Work Simplification in the Home

Simplifying the work in the home and developing efficiency skills continue to be important. 4-H club girls will always have the responsibility of keeping their rooms and homes clean and orderly, assisting in the planning and preparation of meals and the care of children, and at times assuming entire responsibility for the management of the household.

The program can be organized as a separate 4-H home management project or on an activity basis, so that 4-H club girls will be given credit for assistance with any household task. Whatever the household task for which the 4-H club girl is responsible, here is a suggested procedure for her to follow:

1. Know why it is necessary to do the piece of work.
2. Know and use the best ways to do it.
3. Learn to do the job in the least amount of time.
4. Plan the work so that adequate light and working equipment are available; avoid extra steps or motions.
5. Plan to do the job when it fits in with other jobs that need to be done.

Many of the jobs 4-H girls do such as washing dishes, sweeping floors, dusting furniture, washing clothes, and peeling potatoes, will have to be done over and over. One way to help these girls to become "motion minded" in doing their tasks would be to analyze the job. Have 4-H girls write down exactly how the task is done now, and how it may be improved by using the principles of work simplification such as those relating to eliminating unnecessary parts: sitting comfortably, letting gravity help, having both hands work instead of one, making the job safer, using a better tool, arranging work so that everything is within elbow reach, and using all possible help. With this information as a guide, work out an improved method. Effort should be made also to make these tasks interesting to the girls. Studies show that uninteresting tasks tire the doer most.

Labor-saving equipment that 4-H club members can often make and demonstrate their use are: wheel cart, cupboard space savers, sliding trays in drawer, baby table, movable toy shelves, scrubbing chariot or kitchen scooter, laundry cart, portable sewing cabinet, dress form stand, household tool kit, wide ironing board, cleaning closet, and washing machine cover.

At farm and 4-H club meetings such as on Achievement Day, and at home demonstration club meetings, 4-H club girls can emphasize work simplification methods in demonstration. These demonstrations might include easier methods of doing repetitive jobs -- stringing beans, peeling potatoes, using the pressure cooker, hanging up clothing, washing dishes, cleaning drawers, and numerous other household tasks.

#### 4-H Home Management Clubs

The purpose of home management clubs should be to develop the managerial abilities of boys and girls. How to do this, is not too clearly defined.

An excellent "Home Management Yardstick" upon which an entire 4-H home management program may be based is Experiment Station Folder 7, "A Home Management Yardstick, A Device for Measuring Achievement in Home Management." 1/ 2/

- 1/ Experiment Station Folder 7, January 1947, A Home Management Yardstick, by Esther Everett and Irma H. Gross, Michigan State College, East Lansing.
- 2/ Management in Michigan Homes by Irma H. Gross and Evelyn A. Zwemer. An article appearing in Michigan Quarterly Bulletin, Vol. 27, No. 3, pgs.273-281.



Such club work should:

1. Help club members know that management of time and energy is concerned with making plans, completing work started, plan meals as well as use of leisure time, getting plenty of sleep and rest.
2. Management of money means planned spending, saving and sharing, keeping and using personal financial records upon which to base next year's plans.
3. Having the "know how" and doing sewing, mending, canning, cooking, and other household skills.
4. Having the "know how" and doing -- care of clothing, house furnishings, furniture and equipment.
5. Planning for the spiritual, social, and community development of 4-H club member.

In home management club work two special phases that otherwise might be overlooked may be included, namely, home safety and child care. Club programs should teach members how to care for children, give credit to club members for the care of younger brothers and sisters or as "baby sitters." There is no better way to learn management than by being responsible for care of smaller children.

### Conclusion

In the coming ten years, human aspects and relationships of management will come to the fore. Home management should help 4-H club members live happily with their family as well as in a world filled with new inventions from the atomic bomb to the radio. Home management club work should focus on doing daily tasks with joy because one has found the easiest way, realizing that orderliness and manual skills are a part of home management. Home management club work should do its share to making homemaking a profession to which all 4-H club members wish to bring their best abilities. To do this, it will need the continued guidance of 4-H club leaders so that what we teach really brings about the goal we have in mind, better home management as defined in terms of optimal development of the individual.

### FAMILY RELATIONS

Mrs. Lydia Lynde  
Extension Specialist in  
Parent Education

World progress depends upon individual responsibility. Every privilege life brings us is paired with responsibility. When we accept one we should accept both. The privilege of 4-H Club membership brings with it the acceptance of responsibility for the success of the Club program. When we accept the privileges of our community - its schools, churches, playgrounds, and community centers - we are accepting the responsibility of increasing their usefulness to ourselves and our neighbors. The privilege of family membership is paired with the responsibility of helping the family achieve

the best possible comfort, health, and happiness in living together.

The ability to recognize and meet responsibility is a measure of maturity. It is acquired through practice based on understanding. 4-H Club programs should help Club members recognize and understand the nature and problems of the responsibilities that come into their daily lives. They should provide practice. By using a few minutes at each Club meeting a very comprehensive chart of activities can be developed.

Example:

Privilege		
Living with my family	Help keep the family comfortable, well, and happy.	Be orderly, prompt; do my share of work; guard against health and safety hazards.
		Protect younger brothers and sisters. Help the baby learn new habits easily, etc.
4-H Club membership	Help the Club have a good program and achieve recognition.	Take part in discussion; accept assignments; talk over projects with folks at home, and with other Club members, etc.
	Help other Club members succeed.	

FOODS AND NUTRITION

Mary E. Loughhead  
Extension Specialist, Food Preservation

Food supplies for civilian consumption in 1947 are expected to continue at about the same level reached in 1946. There are likely to be short supplies of some individual foods, just as in the past two or three years. Available supplies of most nutrients are expected to continue at a high level provided that; (1) the flour and bread enrichment program is continued; (2) there is a large commercial and home production of vegetables; and (3) there is not a reduction in consumption of fluid milk and cream.

If the enrichment program is discontinued, per capita supplies of riboflavin, iron, niacin, and thiamine will range from ten to twenty-five per cent below 1944-46. Continuation of large production of vegetables is necessary for the maintenance of the supplies of vitamin A and C at the high level of 1945-46. Less calcium and riboflavin will be available if there is a reduction in consumption of fluid milk and cream, as is now indicated, due to higher prices.



Four-H Club members can share with other members of the family responsibility for a nutritionally adequate diet through definite projects in food production, food preservation and food selection and preparation. The following high spots are suggested to implement, or supplement, the basic foods and nutrition program and specific food production projects.

Some suggestions to 4-H members

1. Family Food Supply

Take the lead in making a farm food supply plan for your families, and in keeping a record of success in carrying it out.

Be responsible for some definite garden activity or take full charge of the family garden or a definite part of it.

Grow vegetables that will help to maintain a high level of Vitamin A and Vitamin C in the diet.

Learn to recognize characteristics which indicate good quality in fruits and vegetables.

2. Food Preservation

a. Freezing home produced foods

Learn how to prepare fruits, vegetables, meats, and poultry for freezing in the community locker plant or home freezing cabinet.

Plan a schedule for amount of food to freeze and date of freezing.

Keep a record of foods frozen and date used.

Learn to judge frozen foods for quality.

Give demonstrations on preparing food for freezing; plan exhibits on frozen foods for achievement day, fairs, etc.

b. Canning

Take an active part in canning for the family food supply in keeping with the family food budget.

Older members may can all or part of the food itemized in the canning budget. Younger members may have a definite part in canning activities suited to their age and experience, such as harvesting fruits and vegetables; selection and preparation, timing the processing period, labeling jars.

Judge quality.

Demonstrate methods in canning.

Exhibit quality products.

c. Storage.

Help to plan and set up convenient shelves for canned foods.

Older members help provide appropriate outdoor and indoor storage facilities for fresh fruits and vegetables, cured meats, etc.

- d. Preserve foods by brining, drying, and other methods included in family food supply plan.

3. Food Selection and Preparation

- a. Become familiar with the basic seven food groups and know how to select foods for three meals a day to promote good health.
- b. Participate in National 4-H Health program with foods habits check up and any other health activities related to food.
- c. Pack lunches to include foods liked and food needed.
- d. Plan meals to include more whole grain cereals and other foods to provide nutrients in enriched flour and bread if enrichment is discontinued.
- e. Participate in food buying demonstrations.

During the war there was a trend among farm families toward purchasing more food. Some comparison between purchased foods and home produced and processed foods, in relation to cost, quality and other factors, should be of interest and value to older 4-H Club girls.

4. Apply work simplification to food preparation and food preservation in correlation with work in home management.
- a. Emphasize work simplification in food preservation and food preparation demonstrations.
- b. Learn to use tools efficiently and safely.
- c. Plan food preparation and food preservation work centers to save time and labor.



## THE 4-H CLUB HEALTH PROGRAM

Elin J. Anderson  
Extension Specialist in Rural Health Services

The recently adopted National 4-H Club Health Program stresses that the foundation stone on which to build a sound 4-H club health program is the knowledge of the major health needs of young people in each community or area. The importance of this is based on a growing appreciation of the fact that good health for every child cannot be obtained by personal effort alone but also requires group effort. This, in turn, is due to a reluctant realization that a child born on a farm or in a small town in America has less opportunity to grow up healthy and strong than does a child born in a big city.

How is that possible? To begin with, when he is born the rural child runs a risk, on the average, a fourth greater than his city cousin of not living through the first year of life. He runs a risk, on the average, a third greater than his city cousin of losing his mother when he is born. In some States, these risks are three or four times greater than in others. When he is growing up, the future 4-H club member's enjoyment of the sunshine and fresh air of the open country is offset by the fact that he is less protected than his city cousin from diphtheria, pneumonia, malaria, and all the preventable diseases that modern medical science is most successful in controlling. When he goes to school, physical examinations are rarely more than inspections by teacher and nurse, and are still more rarely followed up by remedying defects found. The cumulative effects of these disadvantages were realized during the war, when farm boys were rejected for the army draft to a greater extent than were the boys of any other major occupational groups.

What can be the reasons for this rural disadvantage? The reasons are many; but the major ones are that rural areas have lacked doctors, dentists, and nurses. They have lacked public health departments, hospitals, and other health services and agencies essential to safeguarding the health of all the people of every community. They have lacked the means to even make best use of the facilities that do exist.

What can a local 4-H club do to make a healthy environment for its members and for all young people? It can do a great deal. First of all, it can set an example of what every individual can do for himself to build and maintain optimum health. Each member can follow a personal health program of proper diet, rest, recreation, good posture, regular physical and dental checkups, and treatment of defects.

Next, each 4-H club member can do much to make the home and farm a safer, healthier, and more beautiful place in which to live by undertaking projects of farm and home safety, home pasteurization of milk, home care of the sick, screening, building a sanitary privy, ensuring a safe water supply, beautifying the home and farm, and many projects that make for a healthy and happy home and farm life.

Then, if 4-H club members join forces, they can do much to make their whole community a healthier and more beautiful place in which all young people have an opportunity of growing up healthy, happy, and strong. By organized visits, they can learn the adequacy of community measures to keep milk, water, meat, and fresh foods clean. They can ascertain the measures for cleanliness and

sanitation in restaurants, schools, and public buildings. They can learn about the effectiveness of the services of the local health department and ways by which they can assist this agency to realize its goals of health protection for all. They can learn about the adequacy of their hospital services, the availability of doctors, dentists, and nurses for adequate health protection of all. They can offer their services to these health agents and to the many voluntary organizations and agencies interested in safeguarding every child from dread diseases.

If 4-H club members learn that their community lacks measures necessary for the adequate health protection of themselves, their plea for such health protection can be the most powerful force to move their elders to provide health services that are essential to safeguarding the health of all children. Then, rural areas will once again enjoy to the full their natural health advantages; and 4-H club members will have the fullest opportunity to achieve the optimum health and well being so essential to responsibility and leadership in a democratic society.

If 4-H clubs in every community were to develop a health program along these lines, they would soon win the goal of equal opportunity of abundant health for all children over the Nation. Guidance on developing a local program toward this goal can be obtained through the new 4-H National Health Program.

## CLOTHING

Alice Sundquist  
Extension Clothing Specialist

High prices and relatively poor quality of fabrics and ready-to-wear places continued emphasis on home sewing and better care of clothing.

### Project organization

A 4-H clothing project can contribute to better clothing planning when each year's unit of work is organized around a theme of interest and benefit to the girl herself, such as: Accessories for school wear (for the beginner); a summer outfit; a cotton school outfit; a woolen school outfit; a cotton sports outfit; or a woolen sports outfit. A wardrobe planned for going away to school, to work in the business world or in industry, or clothes for homemaking may be the best project for an older girl. Working out a real problem will give the girl experience and training in deciding what she needs. Then she can make those items which fit her needs and skills rather than making isolated garments which may not fit into her wardrobe.

### High spots for this year

#### 1. Price rises are likely:

- a. Make sure you really need to make a purchase before you buy.
- b. Take the best care of the clothes you have. Keep them looking better and lasting longer. Replacements are expensive.
- c. Be a wise buyer.



2. Scarcities continue in low and moderate cost garments and staple types of fabrics.
  - a. Use up any yardage on hand.
  - b. Give used garments the "once over" again and see what changes are necessary to keep them "in the running."
  - c. Garments made at home help to relieve the shortage.

Continued emphasis on basic program

A well-planned 4-H clothing club project, based on some plan of interest and value to the club girl, as already noted, should include some items in each of the phases outlined below.

1. Care of clothing. Club members can take care of their own clothing. It is necessary to do a careful job; garments ruined are expensive to replace. There is no place for waste.

- a. Club members can learn the best methods of laundering special garments that cannot be put into the regular family wash, such as:

Woolen sweaters and skirts.  
Rayon blouses and dresses.  
Nylon, rayon and colored cotton hose.

- b. Better daily care and storage will keep clothing in good condition, always ready for wearing. Club members can:

Hang clothes on hangers.  
Air clothing after wearing.  
Avoid getting clothing wrinkled by not over-crowding a closet.  
Learn to sew on fasteners correctly.  
Make improvements in clothes closet.  
Learn good pressing techniques.  
Do necessary repair work, using effective darning and mending methods.  
Store personal clothing to prevent damage from moths, mildew, or other sources.

- c. Club members can help with the family laundry and develop better methods of doing the job so that clothing and household linens will last longer.

2. Home Sewing. Home sewing is an important contribution to family living. When prices are high every garment sewed, mended, altered, or remodeled helps to make the money go farther for clothing.

To get the most satisfaction from sewing one should learn:

- a. Good sewing techniques that are quick to do, have a professional look, and are durable.
- b. The best standards in fitting and pressing.
- c. Better arrangement of sewing supplies to speed up work, such as those for darning, mending, cutting out a garment, and sewing a garment. This may be a well-planned box, tray, bureau drawer,

cupboard, closet, or part of a room.

Club members can also find many opportunities to assist at home by helping other members of the family with their clothing problems.

3. Clothing selection. Suitable and becoming clothing is important to one's sense of well-being. Club members should be able to select clothing that:

Goes well with the clothes they have on hand.

Makes the most of their best features - skin, eyes, hair, and figure.

Is suited to the occasion.

Is within the limits of their rightful share of the family clothing budget.

Contributes to health, safety and best physical development of the body.

Club members should also become aware of the importance of labels and learn how to use them as guides to wise buying.

#### Care of equipment

Club members can learn:

1. How to store sewing supplies and equipment to keep them in good condition.
2. How to keep a sewing machine in good running order.
3. How to clean a machine that has been neglected.

#### Parent cooperation

To develop a better understanding of club work on the part of parents, some provision should be made whereby the mother has a part in planning the project work for the year. The club member should also consider her needs in relation to those of the entire family and find out what can be allowed for spending and what use can be made of garments and materials on hand.

Making a personal clothing inventory and planning with mother is helpful in keeping the project in relation to personal inventory and the needs of other family members. Take into consideration what is to be done in a home economics class in school.

Through mutual consideration of suitable materials (whether they are new or used), home sewing equipment, the ability of the club member, the needs of the club member and the content of school home economics courses, the parents and club members together should be able to agree on the most suitable project and supplies for 4-H club work.

#### Demonstration by every club member

Giving demonstrations is a valuable 4-H club teaching method. Every club member should have the opportunity and responsibility of giving at least one demonstration before the club each year. Such a demonstration should be the result of some phase of the project work during the year or the solution of some special community problem.



Leaders need to see more demonstrations in order to learn how to develop their own demonstration skills and to be able to assist club members in preparation of their demonstrations.

Demonstrations in club meetings come first. Further opportunities should be provided to present demonstrations in the community on such occasions as:

- Meetings of other 4-H club groups.
- County events for 4-H club members.
- School, when it fits into the work.
- Meetings of adults.
- Neighborhood shopping center (in a store) during the shopping hours.

#### For the boys

A number of States are keeping up with the trend toward providing home-economics education for boys as well as girls. Boys have become interested in "bachelor projects." In accordance with approved standards, these include various phases of the clothing project, such as:

- Sewing on buttons.
- Mending tears and rips.
- Replacing worn pockets.
- Darning hose.
- Caring for the making home repairs on shoes and overshoes.
- Laundering and pressing clothing.
- Selecting clothing.
- Improving personal appearance.

#### For all boys and girls

The improvement of personal appearance is of concern to most 4-H club boys and girls whether or not they are enrolled in a clothing project. For discussion and demonstrations in general meetings, the following phases relating to personal improvement may be considered:

##### 1. Care of person.

- a. Care of skin, hands, hair.
- b. Posture.
- c. Shoes and feet.
- d. Food for good health.
- e. Sleep and rest.

##### 2. Care of clothing.

- a. Clean and well ironed or pressed clothing.
- b. Clothes in good repair.
- c. Care of shoes.
- d. Clothes closet improvements.
- e. Daily care of clothes (brushing, airing and hanging up).

c. Selection of clothes.

- a. Clothes suited to the occasion.
- b. Clothes suited to the person.
- c. New clothes that fit in with what garments are on hand.
- d. Clothes that harmonize in color, texture and appropriate-ness to use.
- e. Clothes that are priced in accordance with wise buying principles.

HOME INDUSTRIES

Reba Adams

Extension Specialist in Home Industries

Skilled hands fashioning useful and beautiful articles form links in the chain of human understanding among all nations. They foster the development of a constructive instead of a destructive mind. Thus craftsmen have great power toward the achievement of permanent peace.

The hands of America's 1,700,000 4-H Club members can make 34,000,000 links in a chain which will be very strong for pulling for peace in this country. May 4-H Club members start early in this training themselves for larger service.

Hand skills are needed in all phases of the 4-H program, and therefore, deserve careful consideration in the selection of handicraft activities.

Choosing Craft Activities:

The following are some basic questions which are important considerations when analyzing an activity in the handicraft field:

1. What fundamental teaching principles are involved in it?  
How important are they?
2. How does the finished product fit into the needs of the producer?
3. How does the activity relate to other subjects in the program of the current year?
4. Are the skills and techniques which are necessary to make a good finished product within the capabilities of the people to which the work is offered -- at least the majority of them.
5. After the training period will individuals be able to carry on follow up work in the skills taught? Can they obtain their own materials and equipment?
6. Is the type of activity chosen one that inspires the participant to seek further information on the subject? Is it difficult enough to be interesting and easy enough to be successful?
7. Under what conditions must the demonstrations be given?  
(1 - time limitations; 2 - working space; 3 - size of group;  
4 - acquisition and preparation of materials; 5 - available suitable equipment; 6 - leadership assistance, etc.)



Postwar factors for consideration in program planning

Some factors which may influence the trends of the 4-H Club handicraft program are:

1. The return, to the farm, of the families who during the war held jobs in war plants or other wartime industry.
2. Increased electric power on the farm --
  - (a) Taking the drudgery out of home work, thus giving the families time for more creative work.
  - (b) Providing power for operating home workshop machinery and the machinery for other skills services which can bring income to the family.
  - (c) Providing safer and better lights by which families may work in their shops.
3. The demand for hand-made articles in gift shops and the demand on the part of the public for rare and individually designed objects.
4. Trends of movements toward developments of small independent enterprises.
5. The reduction of the supply of imported hand-made articles resulting from the war and wartime conditions.
6. The application of the wages and hours laws in centers producing handicrafts for the market.
7. Increased enrollments in the arts and crafts schools throughout the country.
8. The necessity for farm families to continue to economize by producing and repairing home furnishings with their own skills as a step toward counteracting inflationary tendencies.
9. The continued need for therapeutic and recreational activities as an aid for relieving mental worries and tense nerves.
10. The scarcity of certain imported handicraft materials, causing us to find suitable substitute materials in our own country.
11. Restrictions on American-produced materials because of their wide use in the vast postwar reconstruction program.

## Evaluation of Handicraft Products

The completed article:

1. Is the finished product beautiful in design?
2. Is the design technically well executed?
3. Is it functional -- does it meet a real need of use or decoration?
4. Is it a part of a line and so usable with other products?
5. Does it meet fashion trends?

### AGRONOMY

O. S. Fisher  
Extension Agronomist

J. M. Saunders  
Extension Cotton Agronomist

Although the active war is ended, there is just as heavy a demand for large productions of quality food, feed and fiber, as during the war years. This production is necessary both to meet the needs for consumption here at home and to help meet the needs in the war-torn countries. To meet these demands, the 4-H clubs can be of tremendous help in their communities by demonstrations in (1) Better land use, (2) Proper crop rotation, including the best fertilization practices, (3) Use of the best seed available, preferably certified seed. Not only can the 4-H club members be of tremendous help on their own home farms, but they can be leaders in their community.

Under No 3, the 4-H club boys can be of special help in developing seed supplies by becoming certified seed producers, either individually on their own home farms, or by forming certification clubs where the club will be a center of good certified seed production for the entire community.

In carrying on such a program, the 4-H boys, not only are a help in producing good seed for the community, but they get a fine training through this cooperation with the Plant Breeders of the State Experiment Stations, and with their State Crop Improvement Association.

This work must be on the same high standards as that of adult members of the State Crop Improvement Association, and as these boys move on to farming for themselves, they will have a profitable seed production program already started.

Certified seed production covers all crops, food, feed and fiber, especially cotton.

Production of fiber crops, especially quality cotton, has provided the highest source of net income to 4-H club members in the Southern States, and, through the records of their accomplishments where good seed and recommended cultural methods were observed, has helped to change entire communities to practices which improved the production and quality of cotton.



## HORTICULTURE

R. J. Haskell

Acting Extension Horticulturist

"Gardens for Food, Health, and Good Living," the theme of the National Garden Conference held in Washington, December 5 and 6, 1946, could well be the slogan for 4-H club work in horticulture.

**Gardens for Food.** World food supplies are still short. Fruit and vegetables produced at home will release appreciable quantities of food to help meet the broader requirements. They will help American families meet the high cost of living.

**Gardens for Health.** The average family does not eat enough vitamin and mineral containing fruits and vegetables for best nutrition. Millions of people are below standard in that regard. Gardens can provide an abundance of fresh, tasty products for good health. Gardening also provides healthful exercise and recreation -- good for both body and soul.

**Gardens for Good Living.** Not only does gardening provide a wide variety of high quality fruits and vegetables for good eating, but it makes home life so much more enjoyable through the development of beautiful home grounds, lawns, trees, shrubs, flowers and attractive recreational facilities for outdoor living.

4-H work in horticulture is directed particularly along the roads pointed out by the 4-H guideposts: Choosing a way to earn a living, producing food and fiber for home and market, and creating better homes for better living.

### Projects

Most of the 4-H club projects in horticulture come within the following classifications:

1. Home gardens -- small, with several different varieties of fruits, vegetables or flowers, largely for home use.
2. Commercial gardens -- larger, with one or more kinds and varieties of fruits, vegetables or flowers, mostly for sale.
3. Home-grounds improvement -- rearrangements of layout of grounds, landscaping, development of lawns and yards.

Regardless of what project is chosen each club member should keep an accurate record of his work, make an exhibit of his products and carefully summarize his results at the end of the season.

### Method Demonstrations

Many phases of horticulture are adaptable for 4-H demonstrations. Fine demonstration teams have taught improved practices to youth and adults alike in the past and should have important places in the program during the next several years.

## Result Demonstrations

New varieties, seed and soil treatments, fertilizing, pest control, harvesting, storing, packaging, and other improved practices can be successfully taught by means of result demonstrations in cooperation with leaders, agents or specialists.

## Exhibits

Exhibits of products of the garden in club, local or county shows or fairs are educational and a good means of stimulating further interest of club members.

## Identification and Judging

Garden club members should be encouraged to learn to identify (1) standard kinds and varieties of vegetables, fruits or flowers, (2) common garden diseases, insects and weeds and how to control them. They should learn to judge quality in vegetables and how to grade them according to recognized standards.

## Contests

Many State and National contests are open to 4-H'ers, some relative to gardening in general and some relative to individual crops such as potatoes, beans, sweetpotatoes and tomatoes. Attention is called to the National 4-H Garden Contest and to the National 4-H Home Grounds Beautification Contest, both sponsored by the Committee on Boys and Girls Club Work. All outstanding young gardeners should be encouraged to participate. The National Garden Institute conducts a "Green Thumb" contest that is also well worth taking part in.

Another educational contest in production and marketing is that sponsored by the National Junior Vegetable Growers' Association. National, regional, sectional and State awards totaling a considerable amount are offered annually to young people between the ages of 12 and 22 for the best production project and marketing studies. Advanced 4-H club members who have shown special interest and versatility in vegetable production should be encouraged by local leaders, agents, and specialists to participate.

## Cooperation

Extension specialists, in cooperation with State 4-H club leaders, occupy a strategic position of leadership in 4-H horticultural work. Much depends on the steps they take to organize and encourage the work, on the materials and aids they furnish or help prepare and on the interest they take in seeing that the program gets across.



## PLANT PATHOLOGY

R. J. Haskell  
Extension Plant Pathologist

Producing food and fiber for home and market is the guidepost most concerned when it comes to control of plant diseases. In 1946 one disease alone, the late blight and rot of tomatoes, caused a national loss that has been estimated at 40 to 50 million dollars. What can 4-H do to help combat these plant diseases in their own crops and to bring about a better knowledge of control on the part of the public in general?

### Learn to Identify Plant Diseases

4-H club boys and girls will want to learn to recognize common diseases of the more important crops. The collection, preservation and labeling of specimens is a useful activity in this connection. Contests in the identification of diseases are staged in some of the States and a feature of the annual meeting of the National Junior Vegetable Growers' Association is the identification of 12 or more important diseases of vegetables.

### Combat Seed-borne Diseases

Many of the most serious diseases of cereal, vegetable and other crops are carried on, in or with the seed. Most of them can be combatted by seed cleaning and treating. Out seed is in special need of chemical treatment this spring because of the prevalence of a new seed-borne disease known as Helminthosporium blight which has attacked the new oats -- Vicland, Boone, Tama, etc., so widely planted in recent years. Wheat, barley, sorghum and flaxseed all have seed-borne diseases for which seed treatment is recommended. Most vegetable seed need disinfecting and protecting with chemicals which are readily available.

Seed treating makes one of the best subjects for demonstration teams.

The use of certified seed is a practice that makes for good crops not only because they come from superior strains and are free from mixture with other kinds and varieties, but because they are usually relatively free from serious seed-borne diseases. In the case of certain crops like potatoes and sweetpotatoes 4-H club members who are sufficiently painstaking and interested have the opportunity to enter their fields for certification and if successful to obtain premium prices for their products.

Other possible activities for older youth are (1) the making of home-made seed treaters for local use and (2) the setting up of custom seed treating services for neighboring farmers.

### Spraying and Dusting

Spraying and dusting fungicides on horticultural crops is one of the important methods of controlling plant diseases. Most fruit crops are benefitted and of the vegetable crops, potatoes, tomatoes, cucumbers and melons, and beans probably need it most. In their projects members should choose their fungicides carefully in the light of the diseases concerned.

This general subject is a good one for demonstration purposes both method and result.

### Watch for Plant Diseases

New diseases are being discovered in our crops from time to time and old ones assume new virulence with changing crops, varieties and weather conditions. 4-H boys and girls will be doing their communities a service by watching for early appearances of disease and communicating it promptly to their leaders and agents.

### ENTOMOLOGY

M.P. Jones

Extension Entomologist

World War II has been won and we are now struggling to win the peace. From most reports this task will be as difficult as winning the war. One of the fundamentals of peace is a prosperous people. Prosperity means profitable production and conservation of our domestic possessions and natural resources. Insects play a very important part in production and conservation. Many insects are beneficial, and many are pests, but by far the greatest number are of little concern to man today. Whether or not many of these insects of minor importance today become pests tomorrow will depend pretty largely on man's activities. Such was the case with many of our present day insect pests, some of which were accidentally transported to new and more suitable locations, some became pests when man introduced more favorable food plants and others became pests when man destroyed large areas of native vegetation and substituted continuous plantings of choice food plants, as was the case with the large acreages of grain in the Middle West and cotton in the South. To compete with the ever increasing insect menace, it has become necessary to develop many new insecticides. The people in the United States spend about 100 million dollars each year for insecticides. 4-H club members by knowing more about insect control can help in the wise and economic use of these materials.

Our market demands higher quality products. To get such products more effective and safer insecticides need to be used. These are often more specific; therefore, it is necessary to know more about the particular insect pests than was the case when our fathers used paris green for most chewing insects and nicotine for most sucking insects.

Regardless of whether club members remain on farms or enter commercial or industrial fields, they will be constantly confronted with entomological problems and the information which they gain while living close to nature will be most helpful to them during the remainder of their lives.

The following list covers many of the things which club members are doing or could be doing to get better acquainted with the field of entomology. It is not expected that any one club member carry out many of these suggestions, but from the list it would appear that each club member can find some activity which he can apply in his club work.



1. Club camp activities.
  - a. Observe insects in native habitats about the camp.
  - b. Make short tours to gardens or fields to observe and collect insects of economic importance.
  - c. Place insects on pins and arrange them in collection box.
  - d. Write up notes about insects on forms provided. (Pg. 41, M.P. 318 4-H Club Insect Manual.)
  - e. Exhibit results of work.
2. Insect contest activities.
  - a. Make intensive studies of ten insects. Learn common name, food, life habits and control (Time to apply control measures and insecticides to use.)
  - b. Stand oral quiz on above. (Score individual and team).
  - c. Exhibit insect collections, notes, and reports and other results of entomology activity.
  - d. Elimination Contest (Community, County and State).
3. Give method demonstrations on entomological practices such as:
  - a. How to make surveys of insect populations.

(Boll weevils, cotton flea hoppers; grasshoppers, adult and eggs; chinch bugs; European corn borer; pea aphids; and others.)
  - b. How to read and interpret insecticide labels.
  - c. Proper method of mixing and applying insecticides.
  - d. Making and installing window and door screens.
  - e. Treating houses, dairy barns, etc., with DDT for fly control.
  - f. How to sun, air, and store woolens and furs (clothes moth and carpet beetle control) and how to use DDT.
  - g. How to apply rotenone mixtures for cattle grub control.
  - h. How to apply control measures for various pests of poultry.
  - i. How to clean grain bins, prepare them for fumigation, and how to fumigate.
  - j. How to treat fence posts, bean poles, and tomato stakes to protect them against insects and decay.
  - k. How to treat buildings for termite control.
  - l. Destruction of grasshopper egg beds.
  - m. How to treat peach trees for borer control.
4. Where to demonstrate.
  - a. 4-H round-ups, fairs, stores, etc.
  - b. Livestock sales barns.
  - c. Near hitching racks or parking lots.
  - d. Women's clubs and such places as people congregate normally.
5. Conduct result demonstrations on insect control such as:
  - a. Value of dusting cotton or other crops when insect situation warrants.

- b. Effect of insect control in 4-H gardens.
  - c. Ridding farmstead of flies by sanitation and use of DET.
6. Beekeeping demonstrations and activities.
- a. Method of mixing and using pollen substitutes (soybean flour) and feeding to bees in spring to build stronger colonies.
  - b. Method of swarm control.
  - c. Method of installing supers.
  - d. Method of requeening.
  - e. Method of collecting pollen.
  - f. Placing bees in orchards, clover fields, and so forth, to show value of pollination by bees.
  - g. Keeping demonstration colonies of bees to show value of modern practices.
7. Conduct insect surveys on:
- a. Levels of populations of cotton insects. European corn borer, pea aphids, pea weevil, etc.
  - b. Locating concentrations of adult grasshoppers in late fall.
  - c. Locating grasshopper egg beds.
  - d. Distribution of European corn borer.
  - e. Emergency of codling moth to aid in timing sprays.
  - f. An area basis to determine levels of population and damage from the insect pests within the area.
8. Relay information relative to impending insect outbreaks, such as cotton leafworm, red spider, armyworm, grasshoppers, chinch bugs, pea aphids, bean beetle.
9. Make collections of insects, their life stages, and samples of damage.
- a. For personal use and as exhibits.
  - b. For reference use by county agricultural and home demonstration agents.
10. Prepare and display entomological exhibits.
- a. Prepare exhibits consisting of:
    - (1) General insect collections.
    - (2) Damaged and protected material.
    - (3) Kinds of insects attacking different plants, livestock, or stored products (each member selecting different groups).
    - (4) Colonies of live termites or ants.
    - (5) Kinds of insecticides.
    - (6) Kinds of insecticide applicators: dusters, sprayers, and aerosols.

- b. Display exhibits at:
  - (1) Bank and store windows and grain elevators.
  - (2) County or State 4-H club camps, round-ups, short courses, etc.
  - (3) Community, county and State fairs.
  - (4) Schoolhouses.
11. Present playlets on entomological practices. Copies of playlets on a few subjects are available. Some that may be performed are on:
  - a. Difficulties encountered in buying insecticides.
  - b. Bug indignation meetings.
  - c. Story of club member carrying on control project on a particular insect.
12. Do custom work on insect control individually or as an organized activity.
  - a. Treat cattle for grubs in accordance with certain fees per head.
  - b. Operate portable sheep-dipping vat.
  - c. Minor termite-control jobs.
13. Organize and conduct group entomological activities such as:
  - a. Participate in surveys.
  - b. Relay survey and control information.
  - c. Do custom work.
  - d. Prepare exhibits.
  - e. Destroy breeding places of pests, such as mosquitoes and flies.
  - f. Participate in entomological contests.
  - g. Entomological clubs (general)
  - h. Apiculture.

Success depends upon cooperation and proper supervision. The field of entomology is so broad and is such an important part of practically every other 4-H club project and activity that, where entomological supervision is adequate, insect control should be made one of the requirements. Without proper entomological guidance the activity will fail. The entomologist must have confidence in the ability of the club members to carry on the activity. He must break down the project so that the part any one club member takes will be relatively simple. He must provide adequate guidance through direct contact and through illustrative and written material. Since the county agent is not a trained entomologist, it will be necessary for the extension entomologist to impress upon him the importance of entomology to 4-H club members.

It has been demonstrated that the success of these entomological programs is dependent upon the county agent's close association with the club members; and, unless the agent can visit the participating club member at least two or three times during the season, the activity is pretty likely to fail. At the time of the visit the agent must show that he has a good



knowledge of the work, must check up on the progress, and must correct any errors before the club member has gone too far. Also he should utilize the participating club member and the information which he has gained. Likewise the State club leaders on their visits to the counties should guide and support the county agents.

The outstanding club work that certain agents have done with insects shows that entomology fits profitably into 4-H club programs. Past experience has shown that the most successful work has been done where there was full cooperation between the county agent, the State 4-H club department, and the extension entomologist.

## LIVESTOCK

C.D. Lowe

Extension Animal Husbandman

While the shooting phases of World War II are over, the need for meat and other animal products continues to be great. It is estimated that total meat requirements in 1947 will reach nearly 23-1/2 billion pounds, which is only slightly under the record productions of 1943 and 1944.

While price ceilings were in effect, 4-H livestock enjoyed exemption from that regulation. Now with all livestock price controls abolished, club animals sell in competition with other market stock. While prices of finished animals are likely to continue at relatively high levels as compared with pre-war, 4-H feeding projects should be kept on a sound economic basis. It will be to the ultimate advantage of club work if preparations are made for a price slump even if it does not occur.

The time-tested advice of making livestock feeding an annual activity is just as applicable to club members as it is to adults. It is good training for future commercial operations. The chance of being able to pick the favorable years for feeding and avoiding the unfavorable ones is very remote.

In the selection of hogs for 4-H projects consideration should be given to the type of the animal in relation to the need for hog products, especially lard. Although fats and oils are now in short supply there is danger that the future will again bring a serious lard surplus problem.

Attention should also be given to the selection of animals, the production of which fits into the local farming system. Home-grown feeds in the main and locally produced stock should be the aims in most club projects. Where conditions warrant the opportunity to make meat animal feeding projects the sources of home food supply should not be overlooked.

The purchase of stock at excessively high prices should be discouraged to avoid possible disappointment and actual monetary loss. Likewise the sale of club stock at such fabulous prices as reported in some cases in 1946, is not in the best interest of club work as a whole.

Where feasible, increase the size of individual projects and cooperate with other members or clubs in marketing through regular commercial channels.

Club members should be encouraged to practice and demonstrate livestock conservation in all its phases. The reduction of preventable losses is a worthy activity.

Wider use of the so-called Danish system of judging animals is a step in the right direction. More stress on personal competition from year to year and less on "beat-the-other fellow" will be for the long-time benefit of club work, and club members.

To learn by doing in preparation of life's opportunities and responsibilities, after all, is the main objective of club work. Hence the nearer club projects can follow the best recommendations offered to adults, the more helpful they will be in the long run.

Livestock projects have a natural appeal to young people and the experience of learning the traits and catering to the needs and care of animals not only contributes to future better farming and homemaking but also to better citizenship.

#### FAMILY MEAT SUPPLY

K. F. Warner  
Extension Meat Specialist

One of the advantages of living on the farm is the opportunity to grow and have an adequate food supply regardless of outside conditions. One of the advantages of 4-H club work is the opportunity that it gives club members to take over responsibility for part of the essential operations on the farm. 4-H projects dealing with meat production, preservation and use touch almost all parts of rural living besides making a much appreciated contribution to family welfare. Phases that could be emphasized are:

1. Budgeting the family's food needs and accepting responsibility for the production and preservation of all or part of the essential meats including curing, canning and freezing preservation.
2. Taking the lead in a similar budgeting, producing and preservation job for school lunch programs, or for neighboring families that might appreciate and need outside assistance.
3. Develop enough background information and skill in some of the operations such as cutting, curing, boning or packaging for freezing that would make an interesting and useful demonstration for schools or community gatherings.

#### DAIRY

R. C. Jones, Extension Dairy Specialist  
W. E. Wintermeyer, Extension Dairy Specialist

The demand for milk in the next year will be greater than the indicated production. A milk production goal of 120 billion pounds has been suggested

by the U. S. Department of Agriculture for 1947. With the dairy herd declining to about 24 million head, to attain this goal dairymen must do a more efficient job than they have ever done before.

As a means of attaining such a goal and greater efficiency, the following phases of work should be stressed:

1. Feed cows better all year.
2. Improve herd management.
3. Provide abundant all-season pasture.
4. Plan for adequate amounts of high quality roughage.
5. Utilize all labor-saving methods and devices.
6. Produce only milk of marketable quality.
7. Develop a sound breeding program.

4-H club members can aid materially in the program by study of these phases and working out the giving supporting demonstrations.

### POULTRY

H. L. Shrader  
Extension Poultry Husbandman

With the pressure for all-out production being removed, the main objective of the 4-H poultry club work from a subject-matter standpoint will be efficiency in production. This will include such factors as culling, feeding, quality marketing, and comfortable housing. The 4-H poultry clubs will select projects reaching over the entire poultry field such as raising turkeys, producing broilers, taking care of laying birds, brooding and rearing chicks, and competitive and educational displays such as egg shows, dressed poultry shows and live bird shows.

The use of more efficient record work will have a large bearing in showing profits and of establishing habits of farm record keeping that will come in good stead as the club members grow up and take over their own farms.

During the war period the sponsors for poultry clubs were secured at the National 4-H Club Congress and other promotions such as the Chicken of Tomorrow which are recognizing the influence of 4-H club work in the development of superior meat type birds. Examples of poultry projects with direct objectives such as a poultry flock for college education will be emphasized.

### LAND-USE PLANNING

Virgil Gilman  
Extension Economist

Land-use planning is a study process in which we try to understand our land resources; what they are; how they are used now; and how they can best be used in the future. Farm boys and girls have a very important stake in the future use of these land resources, and they have a fine opportunity to start some study of this subject right in their own community.

One interesting job is to make a neighborhood or community map showing present land-use for crops, pasture, and woodland. Another is drawing in, in rough outline, the boundaries of operating units. These two jobs, done



on a neighborhood or community basis, show how the pattern of operating units is related to the pattern of land use and suggests how individual farms are made up of combinations of different types of land resources.

Land ownership can also be mapped and studied. Since "ownership units" are not always identical with "operating units" this activity helps call attention to such important land-use instruments as leases, deeds, purchase contracts, grazing permits and water rights. It can also be of great value in calling attention to important types of public land ownership such as public highways, national forests and municipal water supply areas.

Most 4-H club farm projects involve the use of natural resources. Frequently there is a good opportunity to tie in some valuable bit of land-use planning work as, for example, the mapping of noxious weed patches as one step in a community control program; the study of irrigation water supply and use in relation to crop production; the study of seasonal grazing use of private and public lands in relation to livestock production; or the study of the national land utilization outlook in relation to a conservation program.

Where people live in relation to valleys, mountains, streams, farm land, towns and each other is another fascinating subject for study. An easy practical approach is to spot the location of farmsteads and farm population on a neighborhood or community map on which the principal physical features have been sketched in. This device helps in studying the location of roads and schools; in appraising the possibilities for neighborhood and community cooperation; and opportunities for off-the-farm employment.

In order to do land-use planning it is, of course, necessary to have a good knowledge of land resources--the soil, water, timber and grass. There are many possibilities for farm boys and girls to add to their knowledge of these resources by learning to use a soil auger, measuring the flow of irrigation water, keeping precipitation records, mapping local stream courses, taking field trips to nearby forests, etc. Those nature study activities can be tied in with land-use planning or undertaken in connection with regular crop and livestock projects, or undertaken as activities valuable in themselves.

In carrying on such land-use planning activities boys and girls become acquainted with soil maps, vegetation maps, ownership maps and other basic land-use planning materials. They get a community-wide view of land utilization which will be helpful to them in orienting such individual projects as those in crop and livestock production and soil conservation. Also, and very important, they become aware of the more complicated community-wide problems in land tenure, public facilities and services, land conservation and development, and farm organization that they, as citizens, must deal with in trying to bring about better land utilization.

## SOIL AND WATER CONSERVATION

E. C. Hollinger

G. E. Ridell

W. R. Tascher

Extension Soil Conservation Specialists

### Opportunities with Youth

There is a special kind of interest in the land that can be developed easily in young people. Girls and boys readily develop a feeling of the friendliness of the land when they (1) know the soil--how it is formed, life that is in it, what makes some productive or good soils and others poor; (2) know how much good soils provide of the things that are important to their lives and happiness; (3) know how soils can be protected and improved; and (4) find ways and develop abilities to help care for the land.

Young people have a greater interest in soil conservation when they (1) know something of the history of soil use and the declining fertility of once productive lands; (2) recognize that there are new frontiers to explore in the conservation of soil resources; and (3) are aware of a movement throughout this country that enlists farmers, all organized segments of communities, the States and the Federal government in conservation of soil and water resources.

### Considerations in Planning Soil Conservation Phases of 4-H Club Work

Planning for soil and water conservation in the 4-H Club program should provide for:

1. General education leading to an appreciation of soil resources:
  - (a) attitude toward nature such as reflected in the quotation: "I love the big out-of-doors, the smell of the soil, the touch of the rain, the smile of the sun, the kiss of the wind, the song of the birds, and the laughter of the summer breezes in the trees";
  - (b) awareness that poor soil makes poor, discontented people contributing to wars and all kinds of human ills, physical, social, and economic; and (c) knowledge that there is practical and effective remedy.
2. Relating soil conservation to the various 4-H Club activities in which soil conservation is a factor, such as giving attention
  - (a) in nutrition projects, to soil fertility as a factor affecting nutritional value of food as well as the quantity produced;
  - (b) in home improvement projects, to see how the condition of the land affects the support of the home, not only in material features but in the security, hopes, and general morale of the family--that planning for the farm and planning for the home are interdependent; and (c) in selecting, laying out, and treating land for a garden project with consideration of land capabilities and conservation requirements.

3. Giving boys and girls experiences in soil conservation that develop their abilities or skills as well as increasing and strengthening their interest in the care of the land--projects or activities that provide for young people doing things such as applying, or helping to apply, conservation on the farm, on the school grounds, on the roadside, or elsewhere.

#### Youth Activities in Soil Conservation

Development of an acquaintance with and appreciation of soil resources and knowledge of the "why and how" of soil conservation can be advanced through group discussions, exhibits, tours, demonstrations, speaking or essay contests, writing news stories, or otherwise participating in the soil conservation educational programs.

Some activities that may offer opportunity for 4-H Club work in conservation are (1) the production of seed or plants needed for plantings; (2) the harvesting of seed; (3) making soil tests; (4) laying out contour lines; (5) making soil conservation plantings; (6) assisting in farm pond, drainage, or terracing system lay-out and construction; (7) gully control; (8) assisting in farm planning or mapping; (9) stocking ponds with fish and attending to pond fertilization and other measures to make a favorable environment for fish production; and (10) making photographs that tell a soil conservation story.

Such activities may be developed (1) in connection with a general educational program for individual or group participation; (2) in connection with a 4-H Club project of which soil conservation is a part; or (3) as a soil conservation 4-H Club project. They may provide for the progressive development of conservation experiences from the simple to the more complex.

#### Educational Materials and Assistance

Educational materials useful in soil conservation phases of the 4-H Club program are abundant and diversified. The opportunities that exist for observations and activities on the home farm or in the home community and the materials developed locally have most significance to the 4-H Club members.

Local materials can be supplemented by publications prepared or distributed by the State Soil Conservation Board (Committee or Commission), the State Agricultural Extension Service, soil conservation districts, or others. There are many bulletins, posters, circulars, movie films, slide films, and slides prepared by the Federal Extension Service, the Soil Conservation Service, the Forest Service, and other bureaus of the United States Department of Agriculture as well as by corporations and organizations that have interests in soil conservation.

The State Extension Soil Conservationist has comprehensive lists of soil conservation literature and other educational materials and is in position to help in the selection of material most desirable for various locations and conditions. He is also in position to give assistance in planning soil conservation 4-H Club work and can help in arranging for assistance to local Club leaders.



Soil conservation district governing bodies are endeavoring to advance soil conservation within the districts by all possible means. They might be expected to welcome opportunities to encourage interest and activity of all farm youth within the district. Also, the soil conservation programs of districts generally provide opportunities for activities by young people mutually beneficial to them and to the advancement of district objectives. Youth in 4-H Clubs are in an advantageous position to participate. Where 4-H Clubs are in a soil conservation district, many benefits can be developed by relating the 4-H Club soil conservation activities to the program in the community and the district.

Soil conditions and the relationships of individuals to the land are so varied that the development of interest and activity in soil conservation is dependent especially on the appropriateness of the incentives, materials, and training emphasis, and on the environment, age, experience, and desires of the participants. For like reasons, progress in soil conservation will be dependent to a great extent on resourcefulness, preparation, and ability of those who furnish leadership.

#### Educational Incentives and Awards

The interest shown in soil and water conservation by agricultural, civic, and commercial organizations should be so guided that educational opportunities and awards will encourage all young people to do constructive work in land husbandry. The national 4-H soil conservation contest is designed to encourage 4-H Club members to obtain an understanding of soil and water conservation and to apply the practices on the farm or ranch and in the home community. Various types of recognition and incentives available can be used to stimulate participation by club members locally and in counties and soil conservation districts. Such a plan for educational incentives and awards will be of interest to many local groups.

#### Youth Faces the Conservation Job

The youth of today faces the responsibility of caring for land so that continued production of nutritious foods may be assured. The future food supply depends on land with fertile topsoil. Conservation farming preserves this topsoil, increases efficiency of production, and improves the nutritional value of crops.

When fertile topsoil is gone no human generation can restore it. The forces of nature would require hundreds of years to replace the topsoil even if those forces were not interrupted as they have been by man. However, man can work with the forces of nature to build and maintain productive soil. When the soil is maintained in place and good farming practices are followed, the growing plants convert elements from the soil and air into organic matter which provides a richer soil for future crops. Each generation in using the land should maintain its productivity. In the past each generation has left the soil resources less than it found them. Such a process will leave each successive generation poorer. Will the youth of our country face this question and make the practice of good land husbandry the custom throughout our country? The 4-H Clubs can help through direct participation as well as training and experiences which will cause them as citizens to appreciate the importance of soil and water conservation. They will be prepared, as adults, to participate fully in bringing about conservation on the land.

## FORESTRY

W. K. Williams  
A. M. Sowder  
Extension Foresters

The forest with its variety of trees and wildlife and changing as it does with the seasons is fascinating to farm youth. If properly guided the interest of youth in the woodlands can be directed into fields of constructive effort. Forestry with its diversified field of activities offers challenging opportunities to 4-H Club members. The following forestry items are suggested for consideration.

### 1. Tree Planting

This has long been a splendid 4-H project and is needed on many farms especially on worn-out land too poor for other crops. Windbreaks and shelterbelts provide protection for gardens, soils, crops, livestock and the farmstead. Also birds are attracted to aid in insect control and wildlife is benefited. Memorial groves, school and community forests sponsored by 4-H clubs may have a place in the community program.

### 2. Rural Fire Protection

This activity applies to both the farmstead and the farm woods and is one that pays dividends in the saving of life and property. 4-H clubs can make valuable contributions to this project by checking fire hazards, organizing fire patrols, assisting volunteer fire-fighting crews, and by distributing posters, fire prevention pledges, and literature on prevention and control.

### 3. Wood Products

The production of fuel wood and pulpwood through thinning operations offers possibilities for cash returns. The cutting of sawlogs or other heavy timber products is not recommended for younger boys. Older youths engaging in this type of production should work along with adults for safety.

### 4. Management of Younger Stands

The management of younger timber stands on the farm with the assistance of a forester offers experience and cash income. A 4-H member may wish to manage 10 to 20 acres or more, protecting it from fire and conducting improvement operations as needed, having an understanding with his family that he will get the income from the timber products harvested. 4-H contests in stand improvement have been conducted successfully in several States.

## 5. Marketing of Forest Products

The marketing of byproducts of the forest may be applicable in some States. Activities of this kind would include harvesting and marketing of yule logs, Christmas greens, pine cones, tree seeds, black walnuts, meat nuts, and other products.

## 6. Fish and Wildlife Propagation

Wildlife activities dealing with game birds, fur-bearing animals, and fish, including those in farm ponds, stimulate much interest among 4-H Club members. Fish from the farm pond may prove a wholesome addition to the family diet. Farm fish pond construction and shrub plantings for wildlife are feasible operations if properly planned.

## 7. Conservation Education

State and county 4-H Club camps can be made more attractive by including conservation. These programs may cover fire protection, soil and water conservation, forest and wildlife management, nature study, and outdoor craft. Tree identification and the use of native woods for farm building construction and other purposes may add interest. 4-H forestry training camps have accomplished a great deal in developing local leadership in farm forestry.

# AGRICULTURAL ENGINEERING

A. T. Hoffman

Extension Agricultural Engineer

Organized 4-H Club work in agricultural engineering can be widely developed for better living, comfortable homes, better farms, more efficient production and less drudgery. Such improvements involve social betterment, economic improvement, and the improvement of the physical plant--land, buildings, power and machinery.

Agricultural engineering deals with the forces and materials of nature. It concerns their development, utilization, and preservation for the betterment of mankind--the individual, the family, and society. This should be a "natural" for 4-H Clubs for

Clear thinking and purposeful study are necessary to use power and resources intelligently. Great hearts and loyalty are needed to utilize our power and physical resources for the betterment of mankind. Hands trained in skill and craftsmanship are needed to develop and operate the modern farm equipment. Health needs protection with pure water, sanitary premises, comfortable homes, and safe conditions for working and living.



4-H Club boys and girls have innumerable opportunities to develop interesting and valuable projects or activities which are natural parts in the 4-H program and apply to the following 4-H guideposts:

1. Producing Food and Fiber for Home and Market
  - Conservation of soil.
  - Improvement of drainage.
  - Installation of small irrigation systems.
  - Repair, remodeling, and maintenance of farm buildings.
  - Grading and improvement of farm roads.
  - Repair and maintenance of fences.
  - Building and installation of gates, floodgates, and stiles.
  - Installation of water systems.
  - Installation of electrical equipment.
  - Installation of telephones.
  - Checking and removal of fire hazards.
  - Checking and removal of accident hazards.
  - Development and use of labor-saving equipment.
  - Utilization of mechanical, electrical, and animal power to accomplish more timely and thorough work.
  - Utilization of electric power and equipment for economy and efficiency in producing and processing farm products.
  - Checking of production and harvesting losses.
  - Improvement of processing and storage facilities.
  - Installation of controls for preventing losses from rodents, weevils, and disease.
  - Study of labor consumed in farm work and in chores, and the development of easier and more efficient methods of accomplishing the work.
  - Reduction of losses of young pigs and poultry through the development and use of brooders and better shelters.
  - Spraying and dusting of fruits and vegetables.
  - Building of seed mixers and the treatment of seed.
  - Repair and adjustment of sewing machines and other household equipment.
  - Washing, cleaning, and servicing of the family car.
2. Building Health for a Strong America
  - Irrigation of gardens to produce more and better food.
  - Installation and repair of screens for protection from insects.
  - Protection of water supplies against contamination.
  - Installation of septic tanks or other suitable equipment for the safe disposal of sewage and other wastes.
  - Installation of pump or complete running water facilities.
  - Building of incinerators.
  - Weather stripping and insulation of houses for health and comfort.
  - Installation of improved electrical equipment, and lighting, heating, and ventilating equipment.
  - Building or installation of farm refrigerators.
  - Building of hotbeds and coldframes.

3. Creating Better Homes for Better Living  
Repair and modernization of farm houses.  
Installation of water system, electrical equipment, telephones, insulation and heating equipment.  
Painting the farm houses.  
Building of closets, cabinets, built-in furniture and lawn furniture.  
Landscape planning and planting of home ground.
4. Sharing Responsibility for Community Improvement  
Building or improving of 4-H Club cabins.  
Maintenance of community facilities--cabins, parks, schools, churches, cemeteries, community buildings.  
Preventive control of mosquitoes through the patrol and oiling of drainage ditches and stagnant waters.  
Checking of community fire hazards, and the organization of rural fire-fighting companies.  
Checking of accident hazards, and activities to remove the hazards.

Many of these activities can be subdivided or combined with the various 4-H Club projects and activities.

Effectiveness in the development of such activities depends largely on good leadership. Facilities are needed to train local leaders. Leadership training should include the utilization of the principles and practices of agricultural engineering for the physical, economic, and social improvement of farms and communities.

#### MARKETING

Paul J. Findlen  
Paul L. Fletcher  
James F. Milos  
Lee R. Paramore

Extension Marketing Specialists

During the war the major emphasis was on production of agricultural products. Market outlets were available for maximum production at profitable prices. The major marketing problems largely involved physical facilities and the handling of increased volumes of most commodities. With the return of peace and reconversion in agriculture approaching the final stages, increasing consideration is being given to marketing and distribution problems.

The Bankhead-Flannagan Act of 1945 specified marketing and 4-H club work along with several other fields of activity in which extension work should be strengthened and expended. The Research and Marketing Act of 1946 further recognized the importance of and the need for greatly expanding research, service, and educational programs in marketing and distribution. The increased emphasis on marketing and distribution in dealing with postwar agricultural problems indicates the need for major attention to the marketing aspects of 4-H club work.

Practically all 4-H club projects in agricultural production and forestry, except those providing only for farm and home needs, involve marketing. It is just as important that 4-H club projects and activities provide practical training in marketing as in production. Successful production projects may be hampered or result in failures because of marketing difficulties.

There are two approaches to marketing work with 4-H club members. One line of attack involves training and the development of experience in marketing for individual commodities. For example, poultry projects may be set up to include improved marketing practices and methods as well as improved breeding, feeding, and flock management. Such coordinated production and marketing projects provide club members with specific training and experience in both production and marketing and give proper emphasis to quality of product, grades, utilization of market information, marketing methods, and consumer demands. There is further opportunity for large numbers of club members having the same project to sell their products through organized marketing programs. This may involve development of selling under brands and standards of quality by individual club members or the pooling of products for cooperative sales or shipment in large enough volume to assure efficient marketing and the realization of full market values.

Another field of opportunity involves the broader and more generalized approach through training in marketing principles, methods, and practices. Training may be given to all club members on the use of grades and quality standards for important commodities in any county or local area. Instruction may be given at club meetings on the value and use of market news, crop and livestock report on production, prices, and market movements, and market outlook information. Through tours and study trips, 4-H club members may be given valuable training in marketing methods, processing, storing, transporting, handling and merchandising farm products. While in most instances marketing tours and study trips will be confined to local points, it may be possible to work out visits to some more distant markets in connection with district and State club meetings. In other cases, special study tours may be possible.

There are many possibilities for developing educational and training work marketing for 4-H club members. Realization of the possibilities will, in many cases, require assistance and training of county agents and 4-H club leaders. The marketing staff of the Federal Extension Service will cooperate with State club leaders and marketing specialists in developing programs and activities in line with State and local conditions. Assistance may be obtained in training personnel in connection with grading farm products, use of market news, etc., through arrangements with State Bureaus of Markets, U. S. Department of Agriculture agencies, and private organizations.

#### GRAIN MARKETING

W. B. Combs  
Extension Marketing Specialist

Most 4-H club members were given increased responsibilities on the farm during war time. Many of their projects were of such a size that they made a substantial volume contribution to the nation's food supply. Those members



who successfully handled enlarged projects during the war will not be satisfied if the size and importance of their projects are materially decreased now.

The importance of any project can be enlarged by including the marketing of the product as part of the project work. A grain project should not end with the bushel yield per acre, but should be extended to include the dollar yield per acre. This extension will involve a record of costs of production and a study of market demands and market facilities so that plans can be made to produce a readily salable product. The extended project will involve a study of grades and quality so that premiums may be demanded where justified. Only varieties wanted by the markets and adapted to the farm should be planted. Good farm practices such as seed cleaning and treating, fertilizer application and careful harvesting are required. There are other phases of the project, such as the selection of the crop to grow, the acreage to be planted, and the time of marketing, all of which involve some hazards. Decisions on these points require a look into the future and adjustment to the probable market demands. Every farmer has these decisions to make, and valuable training along these lines can be had by the club member through the selection of projects which he believes will be financially profitable.

Because of the availability of statistical data, grain marketing projects offer an excellent means for teaching 4-H members the market factors which must be considered in planning successful farm operations. Projects dealing with the following are recommended.

1. Analysis of seed grain to be planted. If possible, have samples of seed grain brought in to a central place for a "seed clinic" led by the best talent available. The local elevator operator can be helpful here. Such a clinic can determine whether the seed oats are badly mixed with barley and other grains, if wheat is of an acceptable milling variety, and if the hybrid corn selected is adapted to the area.
2. Seed treatment to produce higher grades. Build a seed treater and treat grain for members.
3. Seed cleaning. Find out who has the best equipment; analyze the samples before and after cleaning for weed content.
4. Visit a country grain elevator.
5. Visit a grain processing plant.
6. Study the production statistics and price information for the county, State and Nation.
7. Study the discounts and premiums for various qualities of grain at the nearest terminal market. Your local elevator operator can help on this subject.

8. Learn how to adjust and care for a combine or threshing machine. See your implement dealer for help.
9. Put on a few simple grain grading demonstrations before local groups. These will foster confidence and good will between buyers and sellers at country points. Your local grain buyer can help you with these demonstrations. Helpful information on this project is contained in Miscellaneous Publication No. 62 "4-H Grain Grading Demonstrations," available from the Extension Service at 1108 Post Office Building, Chicago, Illinois

